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or deepen the conception of data levels to emphasize that progress in psychopathology still occurs by the mutual confrontation of basic scientific models: these reflect distinct historical and disciplinary traditions and involve often incompatible assumptions about etiology, outcome, and the realm in which relevant phenomena are to be found. Few other fields are so hospitable to good research of many kinds simultaneously, or need it worse.—*David Jenness, Social Science Research Council, New York City*

MOISES, Rosalio, Jane Holden Kelley, William Curry Holden. *The Tall Candle: The Personal Chronicle of a Yaqui Indian.* 251 pp. University of Nebraska Press, 1971. $7.50.

This book tells something of the underside of President Porfirio Diaz's Mexico before the fall of the regime in 1910. During the final decade the federal rural police maintained apparent order amid what the 1910 Revolution revealed as a seething volcano of unrest. In the north, a major police activity was the rounding up of and shipping to the henequen and sugar cane plantations of the south as many Yaqui Indians as they could find—at least 5,000 of the more than 15,000 members of the tribe.

Rosalio Moisés (a pseudonym) was not among those shipped out of Sonora; but his boyhood was spent in the midst of the world of bitterness, broken families, informers, mutual suspicion, moral degeneration, and social disruption which Diaz's ruthless policy of deportation created among Yaquis. Moises lived through this phase in Yaqui history into the post-revolutionary period and died in 1969. He appears to have been permanently crippled emotionally by the experience, unable ever to allow himself to become involved in lasting personal relations. He went through the motions of establishing family life and participating in the rebuilt Yaqui communities of the 1930s and later; yet he was not fully involved. He stands aloof and unhappy, possibly representative of a type moulded during that last decade of the Diaz regime.

The record of the remarkable remaking of Yaqui communities in Sonora from the 1920s to the present comes through in this chronicle far less clearly than the personality of the narrator. Moisés was not the kind to engage with deep dedication in the uphill struggle which moved many Yaqui men and women. He was present in the small settlements of refugees in Arizona. He was present later in Sonora as the traditional town sites were reoccupied and the old institutions were brought to life again. But he was not really part of it. He remained to the end of his life a cool spectator, and he died expecting the bureaucrats of the agricultural credit bank to accomplish the conquest of the Yaquis and their land as the soldiers of Porfirio Diaz had never quite been able to do.

Moisés wrote his story in English, his third language and the one of which he had least command, with the warm encouragement of William Holden, professor at Texas Tech. It was then discussed at length in Spanish, Moisés' second language, with Holden's daughter, and together they worked out a version edited in such a way as to make it readable in English but also satisfactory to the author, with whom every sentence was carefully checked. It would have been of great value to students of Yaqui culture if a text in the Yaqui language (which of course Moisés knew best) had also been prepared. As it stands, however, it is a valuable record, psychologically, culturally, and historically, of a critical phase in the history of one of Mexico's enduring peoples.—*Edward H. Spicer, Anthropology, Univ. of Arizona*

Mathematics and Computer Science

BOOTHBY, William M., and Guido L. Weiss, eds. *Symmetric Spaces: Short Courses Presented at Washington University.* 487 pp. Marcel Dekker, 1972. $24.50.

The theory of Lie groups lies at the junction of three principal mathematical rivers whose headwaters originate in number theory, geometry, and analysis. Closely related to each simple Lie group is its associated "symmetric space," and on these symmetric spaces many classical mathematical theories find a fascinating new life. This volume, based on a series of short courses at Washington University in St. Louis during 1969–70 by invited experts, contains fifteen expository articles which provide a splendid introductory survey.—*George D. Mostow, Mathematics, Yale University*

DUTTON, John M., and William H. Starbuck, eds. *Computer Simulation of Human Behavior.* 708 pp. Wiley, 1971. $19.95.

This generous collection contains 38 articles, many of them written or revised especially for this volume, together with a bibliography of 1,921 items in the field of computer simulation. The articles appear under five classifications: studies of individuals, studies of interaction among individuals, studies of individuals in the aggregate, studies of aggregation and interaction, and a survey of methodological issues.

It is interesting to compare this volume with the somewhat similar collection, *Computers and Thought,* published ten years earlier. The earlier volume was broader in scope and far more speculative than this; here the emphasis is practical, with a good deal of attention to the usefulness of the end results. Specific applications to business, industry, and government are emphasized.

The overall quality of the writing is excellent, and there is almost always enough material to permit the reader to evaluate the results of the reported simulations. The last section, in which statistical techniques for the evaluation of simulation are discussed, concludes with a plea for more use of information-theoretic concepts in determining the effectiveness of simulations. The book will be useful as a graduate-level text, particularly in connection with courses in economics or sociology, and as a reference book for researchers in this area.—*John Morris, Computer Science, Kirkland College*

ELLIS, Robert. *Lectures on Topological Dynamics.* 211 pp. W. A. Benjamin, 1969. $17.50 cloth, $7.95 paper.

In the introduction to this excellent book, the author singles out three aspects of the theory of dynamical systems: the local, which is concerned with topological methods in the qualitative study of differential equations; the global, which is the study of vector fields on a manifold; and the abstract, in which the setting is a general transformation group. It is this last aspect, especially the study of minimal sets and their homomorphisms, to which the book is devoted.

In the first several chapters, the basic notions of the subject are elucidated—elementary properties of minimal sets, uniform almost periodicity, distal transformation groups, the proximal relation, and the enveloping semigroup. The remainder of the book is devoted to an exposition and applications of the "algebraic" theory of minimal sets which the author has developed in the past decade. If T is a discrete group, it acts on the Stone-Cěch compactification βT as a point transitive transformation group (some orbit is dense). Every such transformation group, and in particular every minimal one (all orbits are dense), is a homomorphic image. Equivalently—and this is the point of view taken in the book—the continuous functions on a minimal set may be regarded as a uniformly closed T invariant subalgebra of the continuous functions on βT.

To each such "minimal" algebra, a group is associated. This leads to the notion of a distal extension, in which case the group determines the algebra. A high point of the book is the proof of the (generalized) Furstenberg structure theorem for distal extensions—they are built up by a (possibly transfinite) sequence of simpler "almost periodic" extensions. Other topics discussed include Knapp's work on Fourier analysis of almost periodic extensions and Furstenberg's on disjointness of minimal sets (for which algebraic theory is particularly suited).

For the most part, the book is very clearly written. The style is somewhat austere, however, and the inexperienced reader may find it tough going. Often, there is insufficient "dynamical" motivation for the concepts introduced; everything is phrased in terms of the algebraic machinery. Nevertheless, study of Ellis's book is essential for anyone seriously interested in topological dynamics. Indeed, the fruitful-

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